

CLAIMS

1. A mobile user interface device for controlling a host computer, comprising:

5 a graphical display subsystem, including a graphical display, for displaying an image;

an input subsystem, including a stylus, for receiving from a user positional data representing spatial positions of said stylus; and

10 a wireless communication subsystem for sending data to and receiving data from said host computer over a wireless communication link; and

means for controlling operations of said graphical display subsystem, said input subsystem and said wireless communication subsystem, said means for controlling (i) causing said wireless communication link to be created; (ii) causing an application program to be run on said host computer; (iii) receiving from said input subsystem said positional data, providing a response to said user in acknowledgment of said positional data, and transmitting over said wireless communication link said positional data to said application program; and (iv) receiving over said wireless communication link from said application program data representing said image, and causing said graphical display subsystem to display said image on said graphical display.

Sub D1/ 2. A mobile user interface device as in Claim 1, wherein said means for controlling comprises:

a central processing unit;

a processor bus coupled to data and address terminals of said central processing unit;

35 a memory subsystem accessible by said central processing unit over said processor bus;

a peripheral bus coupled to said input device subsystem, said graphical display subsystem and said wireless communication subsystem;

5 a system controller unit, coupled to said processor and peripheral busses and under the control of said central processing unit, for controlling over said peripheral bus the operations of said input device subsystem, said graphical subsystem, and said wireless communication subsystem.

23. A mobile user interface unit as in Claim 2, further comprising a keyboard controller coupled to said peripheral bus for receiving keyboard input from one of: (i) a keyboard connected to said mobile user interface; and (ii) a keyboard emulation program executed by said central processing unit, wherein said keyboard emulation program mapping said positional data received in said input subsystem to selections of keys from a keyboard image displayed on said graphical display.

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25 4. A mobile user interface device as in Claim 1, wherein said host computer interprets said positional data as representing digitized strokes of a handwriting.

33. A mobile user interface device as in Claim 2, wherein said system controller unit includes a power conservation circuit for temporarily suspending operation of said mobile user interface device when a predetermined time period elapses without positional data received in said input subsystem.

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5 6. A computer system comprising:  
a hand-held interface devices comprising (i)  
a display device; (ii) a position input device;  
(iii) a wireless receiver and transmitter circuit;  
and (iv) control means for providing an image on  
said display device; and  
a host computer being coupled to (i) a  
wireless receiver and transmitter circuit for  
communicating with said hand held interface  
10 device; and (ii) means for modifying said image.

15 7. A computer system as in Claim 6, wherein said  
wireless receiver and transmitter circuit is accessed  
by said host computer as a shared resource on a local  
area network.

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20 8. A computer system as in Claim 7, wherein said  
position input device provides a plurality of data  
points each indicating a position of said position  
input device relative to an origin, said data points  
being queued in a pen event buffer in said hand held  
interface device for transmission to said host computer  
over a wireless link established between said wireless  
receiver and transmitter circuit of said hand held  
25 interface device and said wireless receiver and  
transmitter circuit coupled to said host computer.

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30 6.9. A computer system as in Claim 8<sup>5</sup>, wherein said  
host computer provides commands over said wireless link  
for displaying graphical images on said display device  
of said hand held interface device.

7.10. A computer system as in Claim 8<sup>5</sup>, wherein said  
host computer has (i) buffer means for storing said  
35 data points received over said wireless link; (ii)  
means for processing said data points; and (iii) an

event injector means for introducing said data points one by one into said means for processing.

5 11. A method for providing a mobile user interface device, comprising the steps of:  
 providing a graphical display;  
 providing an input device for indicating locations on said graphical display; and  
 10 providing a wireless transceiver for communicating display information from said host computer to said mobile user interface device and for communicating said locations from said mobile user interface device to said host computer; and  
 15 sending data representing said locations to said host computer over said wireless link.

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 20 12. A method as in Claim 11, further comprising the step of interpreting in said host computer said locations as representing digitized strokes of a handwriting.

913. A method as in Claim 12, further comprising the step of providing a power conservation circuit for temporarily suspending operation of said mobile user  
 25 interface device when a predetermined time period elapses during which said positional and selection data are out of a predetermined range.